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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/981,840

10/17/2001

Phillip W. Barth

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06/05/2006

AGILENT TECHNOLOGIES, INC.

Legal Department, DL429

Intellectual Property Administration

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EXAMINER

NORRIS, JEREMY C

ART UNIT

PAPER NUMBER

2841

DATE MAILED: 06/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/981,840

Applicant(s)

BARTH ET AL.

Examiner

Jeremy C. Norris

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,4-17,19-30 and 37-39 is/are pending in the application.
- 4a) Of the above claim(s) 4-7 and 19-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,8-17,22-30 and 37-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

The indicated allowability of claims 3, 18, and 37-39 is withdrawn in view of the newly discovered reference(s) to US 5,857,661 (Amada). Rejections based on the newly cited reference(s) follow.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 13, 15-17, 27, 29, 30, 37 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,857,661 (Amada).

Amada discloses, referring primarily to figure 8, a flexible circuit comprising; a substrate (51c) having a topside and plane; a flexible and extensible structure (57) formed within said substrate and co-planar with said substrate, said substrate having a structure topside; an insulated capillary formed on said structure for transferring a fluid (col. 12, lines 55-65) and wherein said structure is extendable out of said plane by a distance greater than a maximum lateral dimension of said structure, such that said structure topside continues to face in a general topside direction [claims 1, 17, 37, 38], wherein said structure has geometric features selected from a group comprising spiral,

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bend, curve, twist, turn, curl, loop, u-turn and zigzag [claims 13, 27], wherein said structure comprises a boss (55) for receiving a force to extend said structure out of said plane (col. 12, lines 45-55) [claims 15, 29], further comprising at least a first insulated pathway (81) and a second insulated pathway (79, figure 14) [claims 16, 30].

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 8-12, 22-26, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amada in view of US 5,924,603 (Santagiuliana).

Amada discloses the claimed invention as described above except Amada does not specifically state that the structure is a spiral [claims 8, 22, 39]. However, it is well known in the art to form an insulated bellows in the form of a spiral as evidenced by Santagiuliana (col. 1, line 65 – col. 2, line 5). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to form the bellows of the invention of Amada in a spiral form as is known in the art and evidenced by Santagiuliana. The motivation for doing so would have been to use a form easily crafted by injection molding (Santagiuliana col. 1, line 65 – col. 2, line 5).

Additionally, regarding claims 9-12 and 23-26, the modified invention of Amada does not specifically teach that the spiral comprises an Archimedes spiral, a parabolic spiral, a polygonal spiral, a square spiral, a triangular spiral, a pentagonal spiral or a hexagonal spiral. However, each one of these shapes is well known and a trivial variant of the generic "spiral" disclosed by the modified invention of Amada. As such, one of ordinary skill in the art would be motivated to use any one of these well-known shapes as the "spiral" in the modified invention of Amada. The motivation for doing so would have been to use simple variants also easy to manufacture. Moreover, it has been held that more than a mere change of form is necessary for patentability. *Span-Deck, Inc v. Fab-con, Inc.* (CA 8, 1982) 215 USPQ 835.

Claims 14 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amada in view of US 5,651,529 (Lieb).

Amada discloses the claimed invention as described above except Amada does not specifically state that the structure is defined by dashed perforations [claims 14, 28]. However, it is well known in the art to use dashed perforations to define a bellows as evidenced by Lieb (figure 1C, col. 2, lines 5-10). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to use perforations to define the bellows in the invention of Amada as is known in the art and evidenced by Lieb. The motivation for doing so would have been to have the ability to gradually increase/decrease the downstream pressure (Lieb, col. 2, lines 1-10).

### ***Response to Arguments***

Applicant's arguments with respect to claims 1, 8-17, 22-30, and 37-39 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy C. Norris whose telephone number is 571-272-1932. The examiner can normally be reached on Monday - Friday, 9:30 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JCSN



Jeremy C. Norris

Patent Examiner

Technology Center 2800